IN THE CLAIMS

1.   (Currently Amended)   An intelligent network service

control point ~~which is connected with~~ for providing an

Internet call waiting service to a terminal communicating with

a server connected to an Internet Protocol (IP) network, said

service control point being connectable to a plurality of

switching systems in a transport layer network over a common

channel signaling network and ~~connected with an Internet~~

~~protocol~~ being connectable to the IP network through a

gateway, said transport layer network being connectable to

said gateway via said IP network, and said switching systems

being connectable to a plurality of terminals, the intelligent

network service control point comprising:

~~first means for storing information "a first terminal is~~

~~being connected to the Internet" into a user information~~

~~management table when a call waiting service request is~~

~~received from said first terminal which is being connected to~~

~~said Internet protocol network over said transport layer~~

~~network; and~~

first means for receiving a call waiting service request

from one of said terminals via one of said server and said

plurality of switching systems, and for receiving an incoming

call notification to the terminal from one of said plurality

of switching systems;

a user information management table to manage the call

waiting request, and including terminal identification

information, user status information indicating whether or not

the user is in access to an Internet, and an address of said

gateway; and

second means for sending an incoming call notification

message ~~destined for~~ to said ~~first~~ terminal ~~to~~ via said

gateway with reference to said user information management

table when ~~a~~ said incoming call notification ~~indicating that~~

~~said first terminal is called from a second terminal~~ is

received ~~from one of said plurality of switching systems~~ by

said first means.

2.   (Currently Amended)   An intelligent network service

control point according to claim 1, wherein

~~said user information management table has an entry~~

~~including a telephone number of said first terminal, flag~~

~~information indicating whether or not said first terminal is~~

~~being connected to the Internet, and address information of~~

~~said gateway, and~~ said first means updates contents of said

~~entry, and said second means makes reference to said flag~~

~~information and address information~~ user information

management table when said call waiting service request is

received.

3.   (Currently Amended)   An intelligent network service

control point according to claim 1,

wherein, upon receipt of a notification response message

indicating a response from a user of said ~~first~~ terminal in

reply to said incoming call notification message through said

gateway, said second means instructs said one of said

plurality of switching systems to carry out a connection

service for an incoming call to said ~~first~~ terminal according

to said notification response message.

4.   (Currently Amended)   A service control gateway

~~through which an intelligent network service control point~~

~~having a connection with a plurality of switching systems in a~~

~~transport layer network over a common channel signal network~~

~~is connected with an Internet protocol network having a~~

~~connection with said transport layer network,~~ adapting to

connect an intelligent layer network and an Internet Protocol

(IP) network, said intelligent layer network having an

intelligent network service control point for providing an

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Internet call waiting service to a terminal communicating with

a server connected to the IP network, said intelligent network

service control point being connectable to a plurality of

switching systems in a transport layer network over a common

channel signaling network, said transport layer network being

connectable to said gateway via said IP network, and said

switching systems being connectable to a plurality of

terminals, the service control gateway comprising:

~~protocol conversion means for protocol-wise converting a~~

~~service request message for requesting an Internet call~~

~~waiting service of said service control point into a message~~

~~addressed to said service control point which includes an~~

~~identifier for identifying one of a plurality of service~~

~~control programs to be executed on said service control point,~~

~~said service request message having been received from a first~~

~~terminal connected to said Internet protocol network over said~~

~~transport layer network; and~~

~~means for sending the said protocol-wise converted~~

~~message to a signal line connected with said service control~~

~~point~~

    a first interface adapted to connect the service control

gateway with the IP network;

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a second interface adapted to connect the service control

gateway with the intelligent layer network;

a memory in which predetermined programs are stored;

a processor for executing the programs;

a service control point (SCP) address management table

including network ID information to identify the intelligent

layer network where an Internet call waiting service requester

is accommodated, service ID information, message type

information, and address information of the SCP; and

a user address management table including user ID

information, user telephone number information, first

correlation ID information for judging correspondence of

massages transmitted between the service control point and the

service control gateway, second correlation ID information for

judging correspondence of messages transmitted between the

server and the service control gateway, and address

information of the server and service status information,

wherein said first interface is arranged to receive an

Internet call waiting service request message for one of said

terminals via the IP network, and

wherein said processor refers to the SCP address

management table and the user address management table when

the Internet call waiting service request message is received,

selects one service control point to which the request message should be transferred, converts a protocol of the request message into that available at the service control point, and sends the protocol-wise converted message to the service control point via said second interface.

5.   (Currently Amended) A service control gateway according to claim 4, further comprising:

protocol conversion means for protocol-wise converting an incoming call notification message indicating arrival of an incoming call ~~from a second terminal~~ to said ~~first~~ terminal into a message addressed to a server being in communication with ~~said first~~ the terminal, said incoming call notification message having been received from said service control point, ~~and said server being included in said Internet protocol network and having a function for transferring messages received from said service control gateway to said first terminal; and~~,

~~means for sending said~~wherein said processor sends the protocol-wise converted incoming call notification message to ~~a signal line connected with~~ said server.

6.   (Currently Amended)   A service control gateway
according to claim 4, _further_ comprising:

protocol conversion means for protocol-wise converting an
incoming call notification message indicating arrival of an
incoming call ~~from a second terminal~~ to said ~~first~~ terminal
into a message addressed to an access point apparatus being in
communication with said ~~first~~ terminal, said incoming call
notification message having been received from said service
control point, and said access point apparatus being ~~included~~
~~in~~ connected to said ~~Internet protocol~~ IP network and having a
function for transferring messages received from said service
control gateway to said ~~first~~ terminal~~; and~~,

~~means for sending~~wherein said processor sends the ~~said~~
protocol-wise converted incoming call notification message to
~~a signal line connected with~~ said ~~Internet protocol~~ IP network
via said first interface.